In the Claims:

Claims 1 – 75 cancelled.

76. (Original) A method for stimulating an immune response in an animal, the immune response being directed toward a ubiquitin fusion protein, the method comprising:

a) providing a ubiquitin fusion protein comprising ubiquitin fused to a single epitope-containing segment, the epitope-containing segment comprising two or more identical epitopes; and

b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

77. (Original) A method for stimulating an immune response in an animal, the immune response being directed toward a ubiquitin fusion protein, the method comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin fused to two or more non-contiguous epitope-containing segments, each epitope-containing segment comprising one or more identical or non-identical epitopes; and

(b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

78. (Original) A method for stimulating an immune response in an animal, the immune response being directed toward a ubiquitin fusion protein, the method comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin fused to a single epitope-containing segment comprising two or more identical or non-identical epitopes, the epitope-containing segments being fused to ubiquitin at fusion sites selected from the group consisting of the N-terminus and an internal fusion site;

(b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

79. (Original) A method for stimulating an immune response in an animal, the immune response being directed toward a ubiquitin fusion protein, the method comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin fused to a single epitope-containing segment comprising one or more identical or non-identical epitopes, the epitope-containing segment being fused to ubiquitin at N-terminus of ubiquitin;

(b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

Claims 80 – 83 cancelled.

84. (Original) A method for stimulating an immune response in an animal, the immune response being directed toward a ubiquitin fusion protein, the method comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin having the peptide QHWSYGLRPGQHWSYGLRPGQHWSYGLRPGQHWSYGLRPGC (SEQ ID NO: 34) fused via its N terminus to the C-terminal residue of ubiquitin; and

(b) administering the conjugate of step (a) to an animal under conditions appropriate for the stimulation of an immune response.

85. (Amended) The method of Claim 84 wherein the physiological consequences of administration to the animal ~~are substantially similar to the consequences of surgical castration~~ is immunocastration.

Claims 86 – 100 cancelled.

101. (New) A method for reducing levels of a predetermined protein in an animal relative to base-line levels, comprising:

a) providing a ubiquitin fusion protein comprising ubiquitin fused to a single epitope-containing segment, the epitope-containing segment comprising two or more identical epitopes; and

b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

8 ~~102.~~ (New) A method for reducing levels of a predetermined protein in an animal relative to base-line levels, comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin fused to two or more non-contiguous epitope-containing segments, each epitope-containing segment comprising one or more identical or non-identical epitopes; and

(b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

9 ~~103.~~ (New) A method for reducing levels of a predetermined protein in an animal relative to base-line levels, comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin fused to a single epitope-containing segment comprising two or more identical or non-identical epitopes, the epitope-containing segments being fused to ubiquitin at fusion sites selected from the group consisting of the N-terminus and an internal fusion site;

(b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

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10 ~~104.~~ (New) A method for reducing levels of a predetermined protein in an animal relative to base-line levels, comprising:

(a) providing a ubiquitin fusion protein comprising ubiquitin fused to a single epitope-containing segment comprising one or more identical or non-identical epitopes, the epitope-containing segment being fused to ubiquitin at N-terminus of ubiquitin;

(b) administering the fusion protein of step a) to an animal under conditions appropriate for the stimulation of an immune response.

D 11 ~~105.~~ (New) The method of any one of Claims ~~101~~ 7, ~~102~~ 8, ~~103~~ 9 or ~~104~~ 10, wherein the predetermined protein is a peptide hormone.

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106. (New) The method of Claim 105, wherein the predetermined peptide hormone is a male-specific or female-specific peptide hormone.

107. (New) The method of Claim 106 wherein the predetermined peptide hormone is gonadotropin releasing hormone.

108. (New) The method of Claim 104, wherein the predetermined protein is tumor necrosis factor.

109. (New) The method of Claim 104, wherein the predetermined protein is a growth hormone protein.

110. (New) The method of Claim 104, wherein the fusion protein is conjugated to a non-ubiquitin carrier protein.